

#NUTRITION

Orange Pith and Lemon Pith

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Citrus fruits are celebrated for their refreshing juice and vibrant flavour, yet one of their most valuable components is routinely discarded. The white, spongy layer beneath the peel, known as the pith, is often avoided for its bitterness and fibrous texture. From a scientific and nutritional perspective, however, both lemon pith and orange pith are dense reservoirs of bioactive compounds that play a significant role in human health.

Understanding Citrus Pith
Citrus pith is the inner albedo layer of the fruit, composed largely of soluble fiber, flavonoids, and polyphenols. Its primary biological function is protection, but when consumed, it delivers concentrated nutritional benefits that are largely absent from juice alone.

Lemon Pith: Bitter, Sharp, and Biochemically Powerful

Lemon pith is notably bitter and sharp in taste, a direct result of its high concentration of flavonoids such as eriocitrin, hesperidin, and diosmin. These compounds are extensively studied for their antioxidant and anti-inflammatory properties. Scientifically, flavonoids found in lemon pith help neutralize free radicals, thereby reducing oxidative stress at the cellular level.

In addition to flavonoids, lemon pith contains significant amounts of pectin, a soluble fiber that supports digestive health. Pectin slows glucose absorption in the intestine, aids cholesterol regulation, and promotes a healthy gut microbiome. The bitterness of lemon pith also stimulates digestive secretions, supporting liver function and enzymatic activity, a trait long associated with bitter plant foods.

Orange Pith: Subtle Bitterness with Systemic Benefits

Orange pith is milder in flavor compared to lemon pith but is equally rich in functional compounds. It contains high levels of hesperidin, naringenin, and pectin, all of which are associated with cardiovascular and metabolic



Mrcchakatika Makes Centre stage In Bengaluru

This is not your usual Sanskrit classic dealing with gods, damsels, apsaras, myths and nobility, it is peopled by gamblers, rascals, philanderers, drunks, avaricious rulers, scheming lovers, bhikshus and priests. It is set not in a forest, palace or celestial realm but in a bustling Indian city in ancient times. And, in a realistic portrayal of the time, all but five elite characters, who speak Sanskrit, slip into the subaltern languages of the time, such as Prakrit.

• Malini Nair

A celebrated courtesan is being chased across the streets of Ujjayini by the king's boorish brother-in-law and his thugs. She takes shelter in the home of a noble, impoverished and much-married Brahmin she is smitten with. To ensure another rendezvous, she leaves her jewellery behind in his son's toy cart. But her attendant's lover steals this bundle and the Brahmin is falsely implicated.

Several hairy twists later, there is a happy ending for all the good people. Along the way, the inept king is overthrown in a coup by a herdsman, the courtesan is murdered but revealed to be alive, and her beloved is saved from the noose at the last moment. For good measure, there are stormy nights and elephant fights.

For over 2,000 years, Shudraka's action-packed Sanskrit play *Mrcchakatika* (the little clay cart), and its plot woven with love, intrigue, crime, satire, caste and class inequities, politics, and human follies, has enthralled readers and theatre lovers. Noted for combining the grand sweep of Shakespeare with the fine irony of Moliere, the play maintains a perennial appeal despite its vintage.

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Shared Benefits and Scientific Similarities

Despite differences in intensity and flavour, lemon pith and orange pith share several core nutritional and physiological benefits. Both are rich in flavonoids that exhibit antioxidant, anti-inflammatory, and cardioprotective effects. Their high pectin content supports digestive health, cholesterol management, and glycemic control. Additionally, both types of pith contribute to liver detoxification pathways and help reduce chronic inflammation linked to modern lifestyle diseases.

Conclusion

Orange pith and lemon pith exemplify the principle that nutritional value is not always found in the most palatable parts of food. Lemon pith offers intense flavonoid concentration and digestive stimulation through its sharp bitterness, while orange pith provides broader systemic benefits with a milder sensory profile. Together, they represent an underutilized yet scientifically validated source of dietary fiber, antioxidants, and metabolic support.

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Ever since the Orientalists discovered the play around 200 years ago, the saga of Vasantasena and Charudatta's trials and travails has travelled the world and been translated widely into Indian and global languages. A popular script, it was turned into desi and western operas, and presented several times on silver screen in multiple languages.

characters in *Mrcchakatika*. As Sanskrit scholar William Ryder points out in the introduction to his 1905 translation of the play, what you find in Shudraka's works are cosmopolitan characters who are 'citizens of the world.'

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Next week, *Mrcchakatika* will be staged in the world's oldest living dramatic tradition that claims a vintage as old as the play itself, koodiyattam, the Sanskrit theatre form from Kerala. Directed by scholar and choreographer G Venu, *Mrcchakatika* will come alive at Bengaluru's Ranga Shankara theatre, its 10 acts compressed into about two hours strong play for its time and the writing is remarkable," said Venu. "Shudraka's concerns are very progressive, he talks of revolt and inequalities. And I would describe Vasantasena as a feminist,

#ARTS



A still from G Venu-directed 'Mrcchakatika'.

and an important figure in the city where the play is set."

Adapted for the first time for koodiyattam, the play marks a departure from the form's focus on mythological epics such as the Ramayana and Mahabharata. For koodiyattam artist Kapila Venu, who will be playing Vasantasena, this is what makes *Mrcchakatika* an invigorating experience. "I find it liberating, playing her, because she does not fit that subservient stereotype," she said. "Vasantasena is contradictory, she is wealthy, intelligent, beautiful and has agency. She does not succumb to the powerful and is drawn to Charudatta because he, like her, is kind and generous. When I play Sita or Shakuntala, I am required to bring lajja (shyness) to the character. Here, I love that I get to keep my chin up at all times."

Sooraj Nambiar, the koodiyattam artist who plays Charudatta, says *Mrcchakatika* is at heart a very current and a very political play. In koodiyattam, where characters are costumed very differently to indicate their high levels of virtuosity or infamy, the characters in

the play will be wearing almost similar costumes to mark their ordinariness. "Charudatta, for example, is an even-tempered man, he is not very expressive and that calls for subtlety," he said. "And even more unusually, it is not he who approaches the nayika with declarations of love or expression of desire. It is she who embraces him first."

Fact and Fiction

There is an ongoing debate over who the playwright Shudraka was. Some like Sanskrit scholar MR Kale

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Koodiyattam is an art of extreme rigour. A ritual art that historians argue became the exclusive preserve of Brahminical groups around 9-12 CE, koodiyattam is a highly codified, arcane and stylised form where actors' manuals (attaprakaram) outline characters. The enactment, recalling past histories, lasts not over hours but days and weeks.

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Toulouse-Laurec. There are records of the play in other parts of Europe in the late 19th century and in England, where it has been countless productions. In India itself, the play has seen adaptations in several languages, especially Marathi, Telugu, Bengali and Hindi. Activist and reformer Kamaladevi Chattopadhyay played Vasantasena in a silent Kannada film by the same name in 1931. But one of the most inventive and contemporary adaptations of *Mrcchakatika* was Habib Tanvir's 1958 play *Mitti ki Gadi*, in which he first drew on the folk traditions of Chhattisgarh.

"It was at a 2002 show of his play that Tanvir and I spoke of the play's possibilities for koodiyattam," said Venu. "By that time, we had done the first act of Shakuntala and he had been very appreciative of it. But starting any new production from scratch in koodiyattam is a very tough task."

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ry (nirvahanam), sometimes to the beginning of time, and painstakingly detailed character minutiae, lasts not over hours but days and weeks. Scholar David Shulman, in a lyrical essay for *The New York Review of Books* in 2012, wrote of the experience of watching a 29-night performance of a single act from the Ramayana. Of the form's refusal to fast forward even in an attention-starved world, he said: "I think I live my life in this constant rush towards death, almost never allowing a single movement of the body, or a single passing thought of any power or novelty, or even a single deep breath or tender gesture, to complete itself without being cut off too soon. I suppose that in this, I am hardly alone. Koodiyattam is profoundly, perhaps uniquely, therapeutic in this respect."

With the passage of time, many things have changed in the art: it is no longer exclusive to one community, it has stepped out of temple grounds, and increasingly, the needs of the modern audience are kept in mind when the length of the exposition is decided. Sudha Gopalakrishnan, the koodiyattam scholar who was among the experts to argue for the form's inclusion in UNESCO's intangible heritage list, says the change is both welcome and unsettling. "The plot itself is secondary in koodiyattam, which is what marks it apart from realistic theatre," she said. "Its crux is about how you arrest a small moment and use multiple sources and contexts to elaborate it. The trend of adapting it for contemporary context, editing for time and content, started in the 1940s and 1950s with Pankulam Rama Chakyar. But I think this will likely become even more prominent in the coming years."

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A still from G Venu-directed 'Mrcchakatika'.

#NATURE

Miracle Trees

Moringa and Banyan Trees: Nature's Life-Saving Wonders



In a world increasingly seeking natural and sustainable solutions, the Moringa and Banyan trees stand out as extraordinary examples of nature's healing power. Revered for centuries, these trees offer life-saving benefits that span nutrition, medicine, environmental support, and cultural significance.

Moringa: The Nutritional Powerhouse

Often called the 'Miracle Tree,' Moringa oleifera is native to parts of South Asia and Africa. It's renowned for its incredible nutritional value, its leaves are rich in vitamins A, C, and E, calcium, potassium, and protein. This makes Moringa a critical resource in combating malnutrition, especially in drought-affected and famine-prone regions. Beyond nutrition, Moringa seeds serve an important environmental role by naturally purifying contaminated water. When crushed and added to water, the seeds act as a coagulant, causing dirt and bacteria to clump together and settle, effectively cleaning the water without harmful chemicals. Medically, Moringa is a treasure trove. Its leaves and extracts have antimicrobial, anti-inflammatory, and antioxidant properties, helping fight infections and reduce inflammation. Scientific studies also show that Moringa can aid in lowering blood sugar and cho-

Banyan: The Shelter and Healer

The Banyan tree (Ficus benghalensis), India's national tree, is equally remarkable. Its sprawling canopy and characteristic aerial roots create vast shaded areas that support ecosystems and provide shelter to many species of birds, insects, and mammals. Medically, the Banyan tree



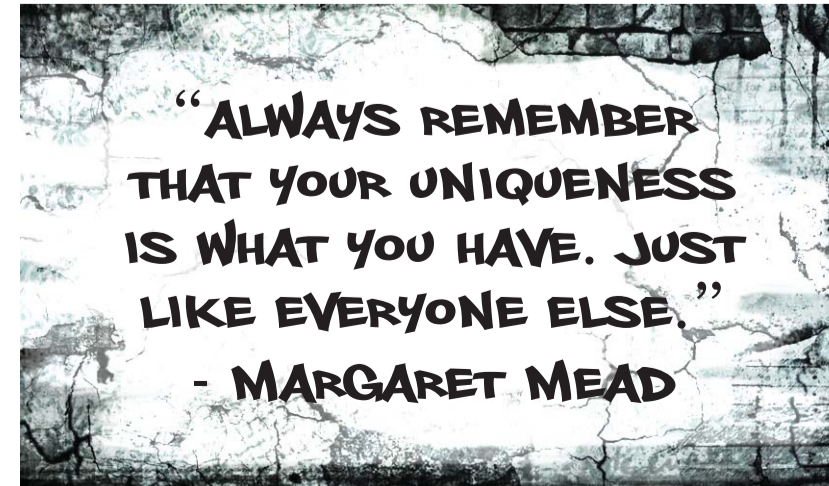
lesterol levels, making it useful in managing diabetes and heart disease. Additionally, the antioxidants in Moringa protect cells from damage, promoting overall health. Moringa's ability to thrive in poor soil and arid climates has made it a focus of global health organizations like WHO and UNICEF, which promote its cultivation as a sustainable tool for improving nutrition and health in vulnerable communities.

Ecological and Social Importance

Both trees are drought-resistant and contribute to combating soil erosion and desertification. They improve soil fertility, support biodiversity, and provide shade that moderates local climates. Their resilience makes them vital for reforestation and sustainable agriculture in challenging environments.

In addition to their health benefits, the Moringa and Banyan trees are keystone species in their habitats, supporting food webs and enhancing ecosystem stability. The Moringa and Banyan trees are more than just plants, they are lifelines for people and the planet. From fighting malnutrition and purifying water to healing wounds and sustaining wildlife, their impact is profound and multifaceted. As modern science validates traditional knowledge, these trees remind us of nature's power to nurture and heal. Planting and protecting Moringa and Banyan trees are an investment in a healthier, greener future, one where natural solutions bring hope and life to communities around the world.

THE WALL

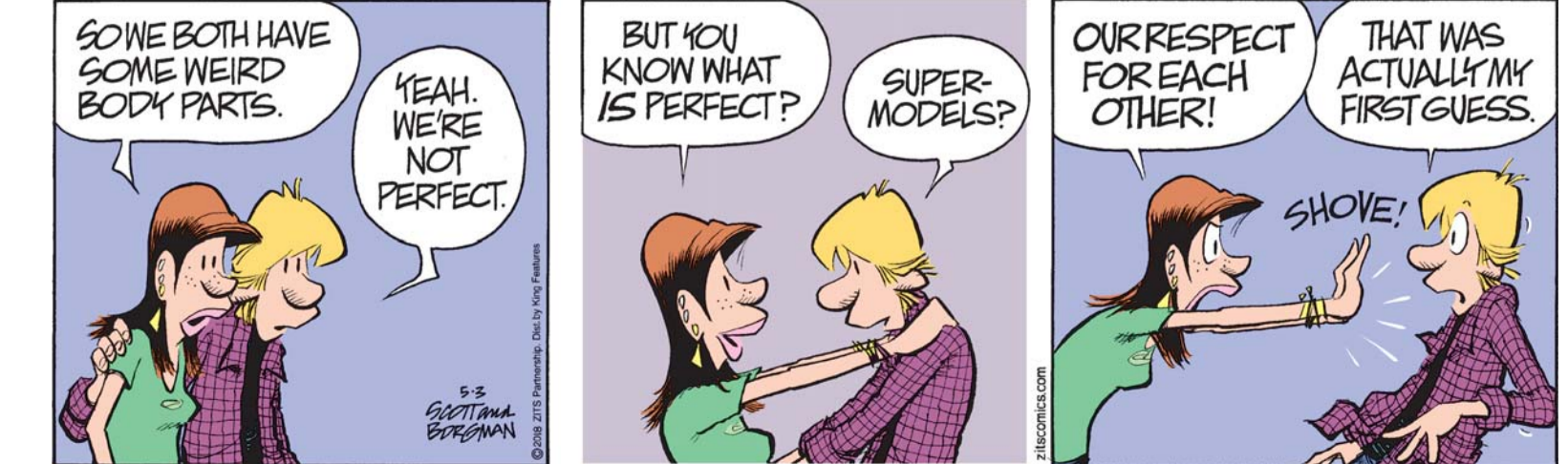


BABY BLUES



By Rick Kirkman & Jerry Scott

ZITS



By Jerry Scott & Jim Borgman